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ShoreGuard Sheet Piling



Project Examples

From protecting the Jefferson Memorial in Washington, D.C. to preventing flow through levees, floodwalls and landfills, for decades CMI's advanced sheet piling products have set the standard for sheet piling structures around the world.

Looking for marine applications? Go to CMI Waterfront Solutions for examples of how to use CMI Sheet Piling at the water's edge.

Cleaning up PA with CMI Sheet Piling Indian Creek Watershed *Saltlick Township, Fayette County PA*

The water from Indian Creek once flowed red with iron discharge from the old Melcroft No. 1 mine. The quality of the water had long been a significant public health and safety concern to local residents. The 3.5 million dollar Anna and Steve Gdosky Indian Creek Restoration Project was a cooperation of community members, the Mountain Watershed Association, the state Department of Environmental Protection and the state



Natural Resources Conservation Service.

The project utilized a design developed by the U.S. Department of Agriculture and the state NRCS. Five separate ponds were constructed utilizing ShoreGuard vinyl sheet piling. Like many other government agencies, the NRCS chose vinyl sheet piling because of the inert properties of the material which will never rust, rot, corrode or decay.

Florida Gas Plant Site is contained using CMI Sheet Piling Solutions.

*United States Environmental Protection Agency
Calumet, MI*

In the Township of Calumet, Michigan, an industrial site, which belonged to the former Manufactured Gas Plant (MGP), contained hazardous substances that were migrating off-site. Given the assignment of containing the uncontrolled discharges of coal tar waste into a drainage ditch, the Environmental Protection Agency (EPA) utilized CMI ShoreGuard sheet piling to construct an impermeable barrier around the hazardous site.



The EPA chose the ShoreGuard SG525 profile because of its patented I-Beam locking system and full box design. Only CMI vinyl sheet piling profiles can provide such a water tight barrier to prevent further seepage. This level of performance cannot be obtained with other types of sheet piling or slurry systems. The panels were driven to varying depths down to 17 feet below ground surface (bgs) based on historic and Site Assessment soil and plume data.

CMI Vinyl Sheet Piling: Get the Best for Less

*Forsyth County Utility Commission
Winston-Salem, North Carolina*

When the Forsyth County Utility Commission decided to build a concrete dam across the Yadkin River, they knew river containment and flood control would be a primary concern. The river's tendency to flood meant the project had to be designed in a way to prevent the river from rechanneling around the dam during periods of high water levels. They decided to control the water with a CMI sheet piling cut-off wall. During the planning phase, the commission discovered that they could significantly reduce their costs by using CMI vinyl sheet piling. Project Engineer Jeff Coggins stated, "It was an economic decision. It was just cheaper to use vinyl."



Creating the Best Barriers for the Job

*Medley Landfill
Miami, FL*

Waste Management, Inc. required a cut-off

wall that would prevent water migration underground as well as on the surface. Affordability, ease of installation, as well as the corrosion and chemical-resistant properties made CMI vinyl sheet piling the best option for the job. The cut-off wall was installed at a rate of 300 linear feet per day which reduced the project cost by over \$300,000.



Protect Vital Operations from Mother Nature

Phillips Petroleum
Sweeny, TX

Phillips Petroleum faced a problem that many coastline businesses confront when a hurricane blew through their area and flooded a brand new power plant facility. To prevent future flood damage, they decided to build a six-foot floodwall to protect their facility. Philips initially considered steel sheet piling for the job, but instead chose CMI vinyl sheet piling based on cost savings as well as ease of installation. Due to the plant's layout, they needed to install the wall in an area where large bulky equipment would have limited maneuverability. Since vinyl is significantly lighter than steel, they required far less heavy machinery for material transport and installation.



Stand Up to Harsh Marine Environments with a Core of Stability

US Army Corps of Engineers,
Wallaceville Dam
Wallaceville, TX

The USACOE required sheet piling to reinforce the dam and protect the spillway on the Trinity River lock system. The dam is exposed to salt water, so risk of corrosion was of primary concern. Vinyl was the clear choice above steel due to its corrosion-resistant properties. The USACOE was able to extend the service life of the dam by reinforcing it with a sheet piling capable of a 50-year design life.



Inert CMI Materials Add Levels of Control to Results

Chem Waste
Lake Charles, LA

Vinyl's chemical resistance can provide more than just a protective barrier in waste disposal areas. By building a water control cut-off wall with sheet piling made from an inert material, Chem Waste was able to accurately monitor the groundwater.



National Park Service

Jefferson Memorial
Washington, DC

The Jefferson Memorial's original construction, dating back to 1946, included a steel sheet piling wall around the base for foundation protection. When renovations started on the memorial, workers discovered that the original steel sheet piling had deteriorated from the salt water content of the swampy Washington DC terrain. Because of the scale and important nature of the project, they required a replacement material that would out-perform steel in those conditions. They chose CMI sheet piling for the project because it met their 100-year design life criteria.



Supporting Local Businesses Against Mother Nature

*South Padre Island, La Quinta Hotel
South Padre Island, TX*

South Padre Island is located in hurricane country, and to try to reduce flood damage, the island building codes required new structures to be built at higher elevations than many of the existing lots. The La Quinta Hotel solved this dilemma by building up the soil using CMI sheet piling. They reduced their costs by choosing vinyl over steel, and because vinyl requires less heavy machinery for transportation and installation than steel sheet piling, they were able to maneuver more easily in the small space between their property line and the beach front.



CMI Sheet Pile Protects Infrastructure and Ecosystems Alike

*US Fish and Wildlife, Hagerman National Wildlife Refuge
Sherman, TX*

The Hagerman National Wildlife Refuge sees frequent fluctuations in water levels which can cause dirt roadways through the refuge to wash out. In this case, the US Fish and Wildlife Department was not interested in controlling the water or preventing the flooding. Instead, they viewed the change as part of the natural cycle of the habitat and wanted to find a way to ensure that their roads could withstand the flooding without eroding and washing away. They chose CMI vinyl sheet piling for two reasons. First, vinyl is an inert material that would not impact the chemical balance of the delicate ecosystem in which it was to be installed. Second, vinyl's ease of installation meant they could shorten their installation time as much as possible to lessen the impact on the surrounding habitat.



Deep Containment with CMI Sheet Piling

*Chemical Facility
Pasadena, TX*

URS Corporation installed this cut-off wall to prevent run-off and protect the area's aquifer. They used 42 foot long CMI vinyl sheet piling for the job. Vinyl's chemically inert properties

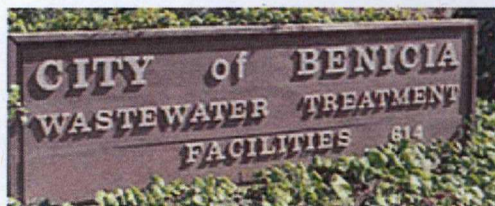
made it a natural choice for this cut-off wall.



Form versus Function: With CMI Sheet Piling You Can Have Both!

*Wastewater Treatment Facility
City of Benicia, CA sheet-piling-story*

Of all of the materials available for the construction of floodwalls near residential areas, CMI vinyl sheet piling provides the cleanest, most consistently aesthetic appearance. The Wastewater Treatment Facility of Benicia, California, required a water control structure to protect against occasional flooding from a nearby stream. Because of the facility's proximity to a condominium development, the facility wanted a material that would provide the most satisfactory view for nearby residents. Due to the use of its co-extrusion manufacturing process, all of CMI's vinyl sheet piling is manufactured with the highest level of UV resistance for a lifetime of service.



CMI Sheet Piling Enhances Other Barrier Materials and Reduces Overall Costs

*US Army Corps of Engineers, Ram Island Causeway
Long Island, NY*

CMI sheet piling was the product of choice for soil reinforcement along the Ram Island Causeway. The sheet piling was installed in combination with rip rap to prevent soil from sifting away and causing the road surface to settle. The durable, strong interlocking sheet piling created an effective barrier that reduced the amount of rip rap necessary to complete the project, and provided a longer-term solution than rip rap alone. Additionally, CMI's sheet piling reduced the cost and surpassed the expected design life over steel sheet piling.



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